

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P232010

Luminaire Tested: **FVS4M-4-LD4-40-2STD-PA187-UNV-EDC1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232010
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FVS4M-4-LD4-40-2STD-PA187-UNV-EDC1
Description: FAILSAFE FVS LED FIXTURE
4FT LENGTH, 2-MODULE LED WITH PA187 LENS
Light Source: (168) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

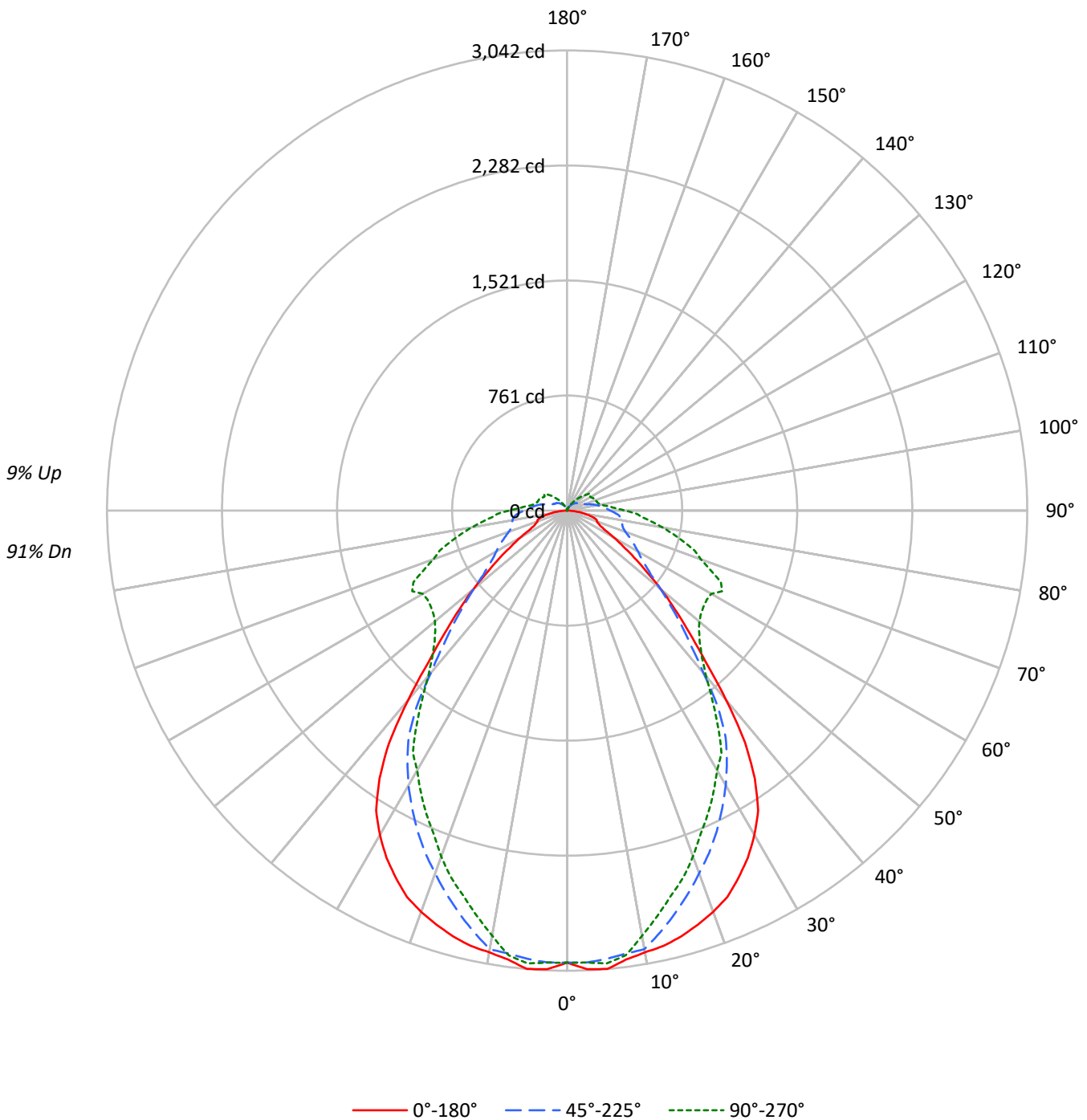
Lumens per Lamp: N/A
Luminaire Lumens: 6927.0 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.02 / 1.12
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')
CIE Type: Direct

Input Watts (W): 67.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

TEST NUMBER: P232010

CATALOG NUMBER: FVS4M-4-LD4-40-2STD-PA187-UNV-EDC1

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	91
1	106	101	96	92	102	98	94	90	92	89	85	86	84	81	81	79	77	75
2	97	89	82	76	93	86	80	74	81	76	71	76	72	68	72	69	66	63
3	89	79	71	64	86	76	69	63	72	66	61	68	63	59	64	60	57	54
4	82	70	62	55	79	68	61	55	65	58	53	61	56	51	58	54	50	47
5	76	64	55	49	73	62	54	48	59	52	47	56	50	45	53	48	44	42
6	70	58	49	43	68	56	48	43	54	47	42	51	45	40	49	44	39	37
7	66	53	44	39	63	52	44	38	49	42	37	47	41	36	45	40	36	34
8	61	49	40	35	59	48	40	35	45	39	34	44	38	33	42	36	32	30
9	58	45	37	32	56	44	37	31	42	36	31	40	35	30	39	34	30	28
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	36	31	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27147	27147	27147
5°	27618	26089	26033
10°	27116	25122	23809
15°	27050	23083	21386
20°	26808	21134	19306
25°	26248	19314	17280
30°	25251	17386	15440
35°	23181	15325	13568
40°	18604	12001	11267
45°	13973	9375	9957
50°	10821	7345	9392
55°	8005	6040	9392
60°	6013	5476	9802
65°	4746	5120	10536
70°	4885	4818	9418
75°	5411	4881	8652
80°	4535	5322	7602
85°	3283	5664	6610



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.3	4.1
10°-20°	781.6	11.3
20°-30°	1095.0	15.8
30°-40°	1154.2	16.7
40°-50°	876.6	12.7
50°-60°	662.2	9.6
60°-70°	613.7	8.9
70°-80°	495.0	7.1
80°-90°	332.2	4.8
90°-100°	205.4	3.0
100°-110°	144.4	2.1
110°-120°	109.0	1.6
120°-130°	83.7	1.2
130°-140°	51.4	0.7
140°-150°	26.3	0.4
150°-160°	9.9	0.1
160°-170°	2.0	0.0
170°-180°	0.0	0.0
0°-30°	2160.8	31.2
0°-40°	3315.0	47.9
0°-60°	4853.9	70.1
0°-90°	6294.9	90.9
90°-120°	458.7	6.6
90°-150°	620.2	9.0
90°-180°	632.0	9.1
0°-180°	6927.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2988	2988	2988	2988	2988	
5°	3042	3015	2976	3001	3005	287
15°	2914	2904	2756	2688	2640	822
25°	2679	2503	2340	2246	2206	1231
35°	2163	1971	1826	1739	1738	1325
45°	1141	1103	1065	1122	1240	898
55°	541	560	632	892	1101	494
65°	244	344	473	989	1121	257
75°	183	200	377	792	798	185
85°	49	112	340	490	498	55
90°	2	66	285	391	382	4
95°	2	60	238	297	285	1
105°	2	57	160	222	207	2
115°	2	51	101	184	192	2
125°	2	43	86	154	186	1
135°	2	32	67	98	131	2
145°	2	24	47	59	67	2
155°	3	14	25	27	28	1
165°	3	6	11	6	10	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P232010

CATALOG NUMBER: FVS4M-4-LD4-40-2STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2988.3	2988.3	2988.3	2988.3	2988.3
2.5°	3034.3	3021.2	2989.9	2997.3	2990.7
5°	3041.7	3015.4	2975.9	3001.4	3004.7
7.5°	2993.2	3001.4	2953.7	2972.6	2965.2
10°	2965.2	2982.5	2943.9	2905.2	2854.2
12.5°	2947.2	2944.7	2852.6	2795.8	2747.3
15°	2914.3	2904.4	2756.4	2688.1	2639.6
17.5°	2870.7	2834.5	2656.1	2572.2	2546.7
20°	2823.0	2723.5	2551.6	2464.5	2433.2
22.5°	2765.4	2619.9	2450.5	2360.0	2308.2
25°	2679.1	2503.1	2339.5	2246.5	2206.3
27.5°	2586.2	2381.4	2218.6	2129.8	2096.1
30°	2476.0	2253.9	2096.9	2027.0	1981.8
32.5°	2350.2	2121.6	1964.5	1897.1	1898.7
35°	2162.7	1971.1	1826.3	1739.2	1737.5
37.5°	1932.4	1776.2	1637.2	1578.8	1574.7
40°	1633.9	1567.3	1402.0	1426.7	1428.4
42.5°	1350.2	1311.6	1213.7	1249.1	1319.8
45°	1141.4	1102.7	1064.9	1121.6	1240.0
47.5°	967.0	911.9	921.8	1025.4	1182.5
50°	810.8	773.0	804.2	957.2	1139.7
52.5°	655.4	652.1	699.8	913.6	1115.9
55°	541.1	560.0	631.5	892.2	1101.1
57.5°	436.6	482.7	578.1	895.5	1095.3
60°	359.3	425.1	541.1	925.1	1100.2
62.5°	286.2	381.6	504.1	953.1	1154.5
65°	244.2	343.7	472.8	989.2	1120.8
67.5°	222.8	306.7	438.3	1048.4	1024.6
70°	208.9	267.3	410.3	1000.7	939.1
72.5°	206.4	230.2	389.0	903.7	884.0
75°	182.6	199.8	377.4	791.9	798.5
77.5°	150.5	178.4	371.7	699.8	717.1
80°	111.0	157.1	366.7	621.7	639.8
82.5°	83.9	133.2	357.7	555.1	563.3
85°	49.3	111.8	339.6	490.1	498.3
87.5°	23.8	83.9	314.1	424.3	457.2
90°	2.5	65.8	285.3	390.6	381.6
92.5°	2.5	60.9	261.5	338.0	324.8
95°	1.6	60.0	237.6	296.9	285.3
97.5°	1.6	60.0	220.4	264.8	250.8
100°	1.6	59.2	202.3	243.4	227.8
102.5°	1.6	58.4	182.6	229.4	213.8
105°	1.6	56.7	160.4	222.0	207.2
107.5°	1.6	55.9	137.3	214.6	203.1
110°	1.6	54.3	121.7	202.3	200.6



TEST NUMBER: P232010

CATALOG NUMBER: FVS4M-4-LD4-40-2STD-PA187-UNV-EDC1

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.6	52.6	108.5	192.4	199.8
115°	1.6	51.0	101.1	184.2	191.6
117.5°	1.6	49.3	96.2	182.6	184.2
120°	1.6	46.9	92.9	185.8	178.4
122.5°	1.6	44.4	88.8	173.5	176.8
125°	1.6	42.8	85.5	153.8	185.8
127.5°	1.6	39.5	81.4	137.3	182.6
130°	1.6	37.0	76.5	123.3	162.8
132.5°	1.6	34.5	72.4	109.4	146.4
135°	2.5	32.1	66.6	97.9	130.7
137.5°	2.5	30.4	61.7	87.2	113.5
140°	2.5	28.0	57.6	77.3	97.9
142.5°	2.5	26.3	52.6	68.3	82.2
145°	2.5	23.8	46.9	59.2	67.4
147.5°	2.5	22.2	41.9	50.2	53.5
150°	2.5	18.9	36.2	42.8	41.9
152.5°	2.5	16.4	30.4	33.7	34.5
155°	3.3	14.0	24.7	27.1	28.0
157.5°	2.5	11.5	20.6	21.4	23.8
160°	3.3	9.9	17.3	15.6	20.6
162.5°	3.3	7.4	14.8	10.7	16.4
165°	3.3	5.8	10.7	5.8	9.9
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)